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Sequence Listing could not be accepted due to errors.

See attached Validation Report.

If you need help call the Patent Electronic Business Center at (866) 217-9197 (toll free).

Reviewer: Keisha Douglas

Timestamp: Mon Oct 22 17:32:19 EDT 2007

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Reviewer Comments:

Ile Ala Gly Ser Ala Thr Val Lys Ile Gly Glu Lys Val His Glu Ile
245 250 255

Gly Ile Ala Gly Lys Gln
260

1

1

Please delete the above end of file errors at the end of sequence id#12.

Application No: 10574424 Version No: 1.0

Input Set:

Output Set:

Started: 2007-10-03 15:38:28.689
Finished: 2007-10-03 15:38:30.099
Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 410 ms
Total Warnings: 12
Total Errors: 4
No. of SeqIDs Defined: 12
Actual SeqID Count: 12

Error code	Error Description
W 402	Undefined organism found in <213> in SEQ ID (1)
W 402	Undefined organism found in <213> in SEQ ID (2)
W 402	Undefined organism found in <213> in SEQ ID (3)
W 402	Undefined organism found in <213> in SEQ ID (4)
W 402	Undefined organism found in <213> in SEQ ID (5)
W 402	Undefined organism found in <213> in SEQ ID (6)
W 402	Undefined organism found in <213> in SEQ ID (7)
W 402	Undefined organism found in <213> in SEQ ID (8)
W 213	Artificial or Unknown found in <213> in SEQ ID (9)
W 402	Undefined organism found in <213> in SEQ ID (10)
W 402	Undefined organism found in <213> in SEQ ID (11)
W 402	Undefined organism found in <213> in SEQ ID (12)
E 355	Empty lines found between the amino acid numbering and the
E 321	No. of Bases conflict, this line has no nucleotides SEQID (12)
E 355	Empty lines found between the amino acid numbering and the
E 321	No. of Bases conflict, this line has no nucleotides SEQID (12)

SEQUENCE LISTING

<110> CONTORNI, Mario

<120> LIQUID VACCINES FOR MULTIPLE MENINGOCOCCAL SEROGROUPS

<130> PP021401.0012

<140> 10574424

<141> 2007-10-03

<150> GB0323102.4

<151> 2003-10-02

<150> GB0412052.3

<151> 2004-05-28

<160> 12

<170> SeqWin99, version 1.02

<210> 1

<211> 350

<212> PRT

<213> N. meningitidis

<400> 1

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Ala Ala Thr Val Ala Ile Ala Ala Ala Tyr Asn Asn Gly Gln Glu Ile
35 40 45

Asn Gly Phe Lys Ala Gly Glu Thr Ile Tyr Asp Ile Asp Glu Asp Gly
50 55 60

Thr Ile Thr Lys Lys Asp Ala Thr Ala Ala Asp Val Glu Ala Asp Asp
65 70 75 80

Phe Lys Gly Leu Gly Leu Lys Lys Val Val Thr Asn Leu Thr Lys Thr
85 90 95

Val Asn Glu Asn Lys Gln Asn Val Asp Ala Lys Val Lys Ala Ala Glu
100 105 110

Ser Glu Ile Glu Lys Leu Thr Thr Lys Leu Ala Asp Thr Asp Ala Ala
115 120 125

Leu Ala Asp Thr Asp Ala Ala Leu Asp Ala Thr Thr Asn Ala Leu Asn
130 135 140

Lys Leu Gly Glu Asn Ile Thr Thr Phe Ala Glu Glu Thr Lys Thr Asn
145 150 155 160

Ile Val Lys Ile Asp Glu Lys Leu Glu Ala Val Ala Asp Thr Val Asp
 165 170 175

Lys His Ala Glu Ala Phe Asn Asp Ile Ala Asp Ser Leu Asp Glu Thr
 180 185 190

Asn Thr Lys Ala Asp Glu Ala Val Lys Thr Ala Asn Glu Ala Lys Gln
 195 200 205

Thr Ala Glu Glu Thr Lys Gln Asn Val Asp Ala Lys Val Lys Ala Ala
 210 215 220

Glu Thr Ala Ala Gly Lys Ala Glu Ala Ala Ala Gly Thr Ala Asn Thr
 225 230 235 240

Ala Ala Asp Lys Ala Glu Ala Val Ala Ala Lys Val Thr Asp Ile Lys
 245 250 255

Ala Asp Ile Ala Thr Asn Lys Asp Asn Ile Ala Lys Lys Ala Asn Ser
 260 265 270

Ala Asp Val Tyr Thr Arg Glu Glu Ser Asp Ser Lys Phe Val Arg Ile
 275 280 285

Asp Gly Leu Asn Ala Thr Thr Glu Lys Leu Asp Thr Arg Leu Ala Ser
 290 295 300

Ala Glu Lys Ser Ile Ala Asp His Asp Thr Arg Leu Asn Gly Leu Asp
 305 310 315 320

Lys Thr Val Ser Asp Leu Arg Lys Glu Thr Arg Gln Gly Leu Ala Glu
 325 330 335

Gln Ala Ala Leu Ser Gly Leu Phe Gln Pro Tyr Asn Val Gly
 340 345 350

<210> 2
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 <212> PRT
 <213> N. meningitidis

<400> 2

Ala Thr Asn Asp Asp Asp Val Lys Lys Ala Ala Thr Val Ala Ile Ala
 1 5 10 15

Ala Ala Tyr Asn Asn Gly Gln Glu Ile Asn Gly Phe Lys Ala Gly Glu
 20 25 30

Thr Ile Tyr Asp Ile Asp Glu Asp Gly Thr Ile Thr Lys Lys Asp Ala
 35 40 45

Thr Ala Ala Asp Val Glu Ala Asp Asp Phe Lys Gly Leu Gly Leu Lys
 50 55 60

Lys Val Val Thr Asn Leu Thr Lys Thr Val Asn Glu Asn Lys Gln Asn
 65 70 75 80

Val Asp Ala Lys Val Lys Ala Ala Glu Ser Glu Ile Glu Lys Leu Thr
85 90 95
Thr Lys Leu Ala Asp Thr Asp Ala Ala Leu Ala Asp Thr Asp Ala Ala
100 105 110
Leu Asp Ala Thr Thr Asn Ala Leu Asn Lys Leu Gly Glu Asn Ile Thr
115 120 125
Thr Phe Ala Glu Glu Thr Lys Thr Asn Ile Val Lys Ile Asp Glu Lys
130 135 140
Leu Glu Ala Val Ala Asp Thr Val Asp Lys His Ala Glu Ala Phe Asn
145 150 155 160
Asp Ile Ala Asp Ser Leu Asp Glu Thr Asn Thr Lys Ala Asp Glu Ala
165 170 175
Val Lys Thr Ala Asn Glu Ala Lys Gln Thr Ala Glu Glu Thr Lys Gln
180 185 190
Asn Val Asp Ala Lys Val Lys Ala Ala Glu Thr Ala Ala Gly Lys Ala
195 200 205
Glu Ala Ala Ala Gly Thr Ala Asn Thr Ala Ala Asp Lys Ala Glu Ala
210 215 220
Val Ala Ala Lys Val Thr Asp Ile Lys Ala Asp Ile Ala Thr Asn Lys
225 230 235 240
Asp Asn Ile Ala Lys Lys Ala Asn Ser Ala Asp Val Tyr Thr Arg Glu
245 250 255
Glu Ser Asp Ser Lys Phe Val Arg Ile Asp Gly Leu Asn Ala Thr Thr
260 265 270
Glu Lys Leu Asp Thr Arg Leu Ala Ser Ala Glu Lys Ser Ile Ala Asp
275 280 285
His Asp Thr Arg Leu Asn Gly Leu Asp Lys Thr Val Ser Asp Leu Arg
290 295 300
Lys Glu Thr Arg Gln Gly Leu Ala Glu Gln Ala Ala Leu Ser Gly Leu
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Phe Gln Pro Tyr Asn Val Gly
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<210> 3
<211> 248
<212> PRT
<213> N. meningitidis

<400> 3
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Leu Asp His Lys Asp Lys Gly Leu Gln Ser Leu Thr Leu Asp Gln Ser
 20 25 30

Val Arg Lys Asn Glu Lys Leu Lys Leu Ala Ala Gln Gly Ala Glu Lys
 35 40 45

Thr Tyr Gly Asn Gly Asp Ser Leu Asn Thr Gly Lys Leu Lys Asn Asp
 50 55 60

Lys Val Ser Arg Phe Asp Phe Ile Arg Gln Ile Glu Val Asp Gly Gln
 65 70 75 80

Leu Ile Thr Leu Glu Ser Gly Glu Phe Gln Val Tyr Lys Gln Ser His
 85 90 95

Ser Ala Leu Thr Ala Phe Gln Thr Glu Gln Ile Gln Asp Ser Glu His
 100 105 110

Ser Gly Lys Met Val Ala Lys Arg Gln Phe Arg Ile Gly Asp Ile Ala
 115 120 125

Gly Glu His Thr Ser Phe Asp Lys Leu Pro Glu Gly Gly Arg Ala Thr
 130 135 140

Tyr Arg Gly Thr Ala Phe Gly Ser Asp Asp Ala Gly Gly Lys Leu Thr
 145 150 155 160

Tyr Thr Ile Asp Phe Ala Ala Lys Gln Gly Asn Gly Lys Ile Glu His
 165 170 175

Leu Lys Ser Pro Glu Leu Asn Val Asp Leu Ala Ala Ala Asp Ile Lys
 180 185 190

Pro Asp Gly Lys Arg His Ala Val Ile Ser Gly Ser Val Leu Tyr Asn
 195 200 205

Gln Ala Glu Lys Gly Ser Tyr Ser Leu Gly Ile Phe Gly Gly Lys Ala
 210 215 220

Gln Glu Val Ala Gly Ser Ala Glu Val Lys Thr Val Asn Gly Ile Arg
 225 230 235 240

His Ile Gly Leu Ala Ala Lys Gln
 245

<210> 4
 <211> 179
 <212> PRT
 <213> N. meningitidis

<400> 4
 Val Ser Ala Val Ile Gly Ser Ala Ala Val Gly Ala Lys Ser Ala Val
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Asp Arg Arg Thr Thr Gly Ala Gln Thr Asp Asp Asn Val Met Ala Leu
 20 25 30

Arg	Ile	Glu	Thr	Thr	Ala	Arg	Ser	Tyr	Leu	Arg	Gln	Asn	Asn	Gln	Thr	
		35						40						45		
Lys	Gly	Tyr	Thr	Pro	Gln	Ile	Ser	Val	Val	Gly	Tyr	Asn	Arg	His	Leu	
		50						55						60		
Leu	Leu	Leu	Gly	Gln	Val	Ala	Thr	Glu	Gly	Glu	Lys	Gln	Phe	Val	Gly	
65					70						75			80		
Gln	Ile	Ala	Arg	Ser	Glu	Gln	Ala	Ala	Glu	Gly	Val	Tyr	Asn	Tyr	Ile	
		85						90						95		
Thr	Val	Ala	Ser	Leu	Pro	Arg	Thr	Ala	Gly	Asp	Ile	Ala	Gly	Asp	Thr	
		100						105						110		
Trp	Asn	Thr	Ser	Lys	Val	Arg	Ala	Thr	Leu	Leu	Gly	Ile	Ser	Pro	Ala	
		115						120						125		
Thr	Gln	Ala	Arg	Val	Lys	Ile	Val	Thr	Tyr	Gly	Asn	Val	Thr	Tyr	Val	
130					135						140					
Met	Gly	Ile	Leu	Thr	Pro	Glu	Glu	Gln	Ala	Gln	Ile	Thr	Gln	Lys	Val	
145					150						155			160		
Ser	Thr	Thr	Val	Gly	Val	Gln	Lys	Val	Ile	Thr	Leu	Tyr	Gln	Asn	Tyr	
		165						170						175		
Val Gln Arg																
<210>		5														
<211>		168														
<212>		PRT														
<213>		N. meningitidis														
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Ala	Thr	Tyr	Lys	Val	Asp	Glu	Tyr	His	Ala	Asn	Ala	Arg	Phe	Ala	Ile	
1				5						10			15			
Asp	His	Phe	Asn	Thr	Ser	Thr	Asn	Val	Gly	Gly	Phe	Tyr	Gly	Leu	Thr	
		20						25						30		
Gly	Ser	Val	Glu	Phe	Asp	Gln	Ala	Lys	Arg	Asp	Gly	Lys	Ile	Asp	Ile	
		35						40						45		
Thr	Ile	Pro	Ile	Ala	Asn	Leu	Gln	Ser	Gly	Ser	Gln	His	Phe	Thr	Asp	
50					55						60					
His	Leu	Lys	Ser	Ala	Asp	Ile	Phe	Asp	Ala	Ala	Gln	Tyr	Pro	Asp	Ile	
65					70						75			80		
Arg	Phe	Val	Ser	Thr	Lys	Phe	Asn	Phe	Asn	Gly	Lys	Lys	Leu	Val	Ser	
		85						90						95		
Val	Asp	Gly	Asn	Leu	Thr	Met	His	Gly	Lys	Thr	Ala	Pro	Val	Lys	Leu	
		100						105						110		

Lys Ala Glu Lys Phe Asn Cys Tyr Gln Ser Pro Met Glu Lys Thr Glu
 115 120 125

Val Cys Gly Gly Asp Phe Ser Thr Thr Ile Asp Arg Thr Lys Trp Gly
 130 135 140

Met Asp Tyr Leu Val Asn Val Gly Met Thr Lys Ser Val Arg Ile Asp
 145 150 155 160

Ile Gln Ile Glu Ala Ala Lys Gln
 165

<210> 6
 <211> 464
 <212> PRT
 <213> N. meningitidis

<400> 6

Ser Pro Asp Val Lys Ser Ala Asp Thr Leu Ser Lys Pro Ala Ala Pro
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Val Val Ser Glu Lys Glu Thr Glu Ala Lys Glu Asp Ala Pro Gln Ala
 20 25 30

Gly Ser Gln Gly Gln Gly Ala Pro Ser Ala Gln Gly Ser Gln Asp Met
 35 40 45

Ala Ala Val Ser Glu Glu Asn Thr Gly Asn Gly Gly Ala Val Thr Ala
 50 55 60

Asp Asn Pro Lys Asn Glu Asp Glu Val Ala Gln Asn Asp Met Pro Gln
 65 70 75 80

Asn Ala Ala Gly Thr Asp Ser Ser Thr Pro Asn His Thr Pro Asp Pro
 85 90 95

Asn Met Leu Ala Gly Asn Met Glu Asn Gln Ala Thr Asp Ala Gly Glu
 100 105 110

Ser Ser Gln Pro Ala Asn Gln Pro Asp Met Ala Asn Ala Ala Asp Gly
 115 120 125

Met Gln Gly Asp Asp Pro Ser Ala Gly Gly Gln Asn Ala Gly Asn Thr
 130 135 140

Ala Ala Gln Gly Ala Asn Gln Ala Gly Asn Asn Gln Ala Ala Gly Ser
 145 150 155 160

Ser Asp Pro Ile Pro Ala Ser Asn Pro Ala Pro Ala Asn Gly Gly Ser
 165 170 175

Asn Phe Gly Arg Val Asp Leu Ala Asn Gly Val Leu Ile Asp Gly Pro
 180 185 190

Ser Gln Asn Ile Thr Leu Thr His Cys Lys Gly Asp Ser Cys Ser Gly
 195 200 205

Asn Asn Phe Leu Asp Glu Glu Val Gln Leu Lys Ser Glu Phe Glu Lys
 210 215 220
 Leu Ser Asp Ala Asp Lys Ile Ser Asn Tyr Lys Lys Asp Gly Lys Asn
 225 230 235 240
 Asp Lys Phe Val Gly Leu Val Ala Asp Ser Val Gln Met Lys Gly Ile
 245 250 255
 Asn Gln Tyr Ile Ile Phe Tyr Lys Pro Lys Pro Thr Ser Phe Ala Arg
 260 265 270
 Phe Arg Arg Ser Ala Arg Ser Arg Arg Ser Leu Pro Ala Glu Met Pro
 275 280 285
 Leu Ile Pro Val Asn Gln Ala Asp Thr Leu Ile Val Asp Gly Glu Ala
 290 295 300
 Val Ser Leu Thr Gly His Ser Gly Asn Ile Phe Ala Pro Glu Gly Asn
 305 310 315 320
 Tyr Arg Tyr Leu Thr Tyr Gly Ala Glu Lys Leu Pro Gly Gly Ser Tyr
 325 330 335
 Ala Leu Arg Val Gln Gly Glu Pro Ala Lys Gly Glu Met Leu Ala Gly
 340 345 350
 Ala Ala Val Tyr Asn Gly Glu Val Leu His Phe His Thr Glu Asn Gly
 355 360 365
 Arg Pro Tyr Pro Thr Arg Gly Arg Phe Ala Ala Lys Val Asp Phe Gly
 370 375 380
 Ser Lys Ser Val Asp Gly Ile Ile Asp Ser Gly Asp Asp Leu His Met
 385 390 395 400
 Gly Thr Gln Lys Phe Lys Ala Ala Ile Asp Gly Asn Gly Phe Lys Gly
 405 410 415
 Thr Trp Thr Glu Asn Gly Ser Gly Asp Val Ser Gly Lys Phe Tyr Gly
 420 425 430
 Pro Ala Gly Glu Glu Val Ala Gly Lys Tyr Ser Tyr Arg Pro Thr Asp
 435 440 445
 Ala Glu Lys Gly Gly Phe Gly Val Phe Ala Gly Lys Lys Glu Gln Asp
 450 455 460

<210> 7
 <211> 644
 <212> PRT
 <213> N. meningitidis

<400> 7
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Gln Ala Gly Ser Gln Gly Gln Gly Ala Pro Ser Ala Gln Gly Gly Gln	35	40	45
Asp Met Ala Ala Val Ser Glu Glu Asn Thr Gly Asn Gly Gly Ala Ala	50	55	60
Ala Thr Asp Lys Pro Lys Asn Glu Asp Glu Gly Ala Gln Asn Asp Met	65	70	75
Pro Gln Asn Ala Ala Asp Thr Asp Ser Leu Thr Pro Asn His Thr Pro	85	90	95
Ala Ser Asn Met Pro Ala Gly Asn Met Glu Asn Gln Ala Pro Asp Ala	100	105	110
Gly Glu Ser Glu Gln Pro Ala Asn Gln Pro Asp Met Ala Asn Thr Ala	115	120	125
Asp Gly Met Gln Gly Asp Asp Pro Ser Ala Gly Gly Glu Asn Ala Gly	130	135	140
Asn Thr Ala Ala Gln Gly Thr Asn Gln Ala Glu Asn Asn Gln Thr Ala	145	150	155
Gly Ser Gln Asn Pro Ala Ser Ser Thr Asn Pro Ser Ala Thr Asn Ser	165	170	175
Gly Gly Asp Phe Gly Arg Thr Asn Val Gly Asn Ser Val Val Ile Asp	180	185	190
Gly Pro Ser Gln Asn Ile Thr Leu Thr His Cys Lys Gly Asp Ser Cys	195	200	205
Ser Gly Asn Asn Phe Leu Asp Glu Glu Val Gln Leu Lys Ser Glu Phe	210	215	220
Glu Lys Leu Ser Asp Ala Asp Lys Ile Ser Asn Tyr Lys Lys Asp Gly	225	230	235
Lys Asn Asp Gly Lys Asn Asp Lys Phe Val Gly Leu Val Ala Asp Ser	245	250	255
Val Gln Met Lys Gly Ile Asn Gln Tyr Ile Ile Phe Tyr Lys Pro Lys	260	265	270
Pro Thr Ser Phe Ala Arg Phe Arg Arg Ser Ala Arg S			